

## **1. Summary of Office Action**

Claims 1-2 and 18-41 were rejected under 35 U.S.C. 102(b) as being anticipated by Dickens '948 ("Dickens"). Official Notice is used to supply deficiencies of Dickens.

## **2. Status of Application**

Claims 1-2 and 18-41 are pending, with claims 3-17 being previously canceled.

## **3. The Claimed Subject Matter**

In a first independent claim, the invention is defined as a polymer powder produced by a process of milling or precipitating comprising a surface which is compact and not jagged.

In a second independent claim, the invention is defined as a polymer powder for producing a three-dimensional object by means of laser sintering. The powder includes a BET-surface which is smaller than  $6 \text{ m}^2/\text{g}$  and at the same time the upper grain limit is below  $100\mu\text{m}$ , the  $\text{D}_{0.9}$ -value is below  $90 \mu\text{m}$ , and the  $\text{D}_{0.5}$ -value is below  $60 \mu\text{m}$  and the particles comprise a basically spherical shape.

## **4. Response to Rejection of the Claims**

Dickens, in Fig. 1 and 2 shows only schematic representations of powder particles as is stated clearly in column 14, lines 27 to 31. Accordingly, the figures, which show particles *in simplified or symbolic form*, cannot show any jaggedness of the powder particles and thus, cannot be taken as accurate depictions of the particles of Dickens. Moreover, any influence of the jaggedness of the power particles on the sintered product is not mentioned in Dickens.

In the rejection, the Examiner cited the Abstract, which described the particles as being small and the powder being flowable. The Examiner cited column 4, lines 43-57, which described the particles as being small and having a defined range of spherical shape of 0.5-0.9 or higher. The Examiner cited column 8, lines 38-67, which described the powder as having a porosity and different diameters. The Examiner cited 10, lines 42-55, which

described the particles having different sizes. The Examiner cited column 12, lines 32-47, which described the powder as being spherical, having a two-tiered size distribution and having a certain amount in a crystalline form. The Examiner cited column 13, lines 35-67, which described the powder as being spherical and having a two-tiered size distribution and having a certain amount being in a crystalline form and a range of temperatures at which it is sinterable. The Examiner cited column 14, lines 1-8 and column 20, lines 1-12, which described recrystallation rates. From this it can be seen that clearly, Dickens has no relevant description of the surface of the powder particles at all and other claimed limitations and only generally discloses the gross morphology of the particles as being spherical or somewhat spherical.

The powder particles used in Dickens cannot have the same properties as those according to the polymer powder according to claim 2, because Dickens disclosed use of a powder having different properties. Fig. 3 of Dickens is not relevant to the present claims because it is related to the number distributions of the powder particles (see column 14, lines 35-36).

The  $D_{0.9}$ -value and the  $D_{0.5}$ -value according to the present application are related to the volume distribution as explained in the first paragraph on page 6 of the application as originally filed. Thus, Fig. 4 of Dickens has to be taken into consideration. However, Fig. 4 of Dickens shows a  $D_{0.9}$ -value that is larger than  $200\mu\text{m}$  and a  $D_{0.5}$ -value that is larger than  $100\mu\text{m}$  and therefore discloses powder parameters completely different from the ones specified in claim 2. Therefore, Dickens cannot anticipate claim 2 or any claim which depends therefrom, for at least this reason.

The term "porosity" used in column 8, line 52 and column 10, line 5 of Dickens is not related to the surface of single powder particles but refers to the powder bed density. Accordingly, though the prior art documents mentions a "porosity," this term is not applicable to a jaggedness of the powder.

Finally, the Examiner concedes that the Dickens does not state any BET values. The Examiner then attempts to provide for the deficiency by stating that the particles of Dickens would have to be the same as the claimed invention "because of the requirements of laser sintering." This makes the fallacious presumption that in order to be laser sintered, all

powders must share precisely the same properties. There is no evidence provided which establishes or proves that laser sintering of polymer powders inherently requires a powder with a specific surface property or specific set of properties coinciding with the claimed invention. It is assumed that the Examiner is employing Official Notice to provide this deficiency of Dickens, which without documentary evidence, must be limited to well-known or common knowledge in the art. Applicants respectfully do not concede this part of the rejection.

## **5. Conclusion**

Because Dickens fails to show each and every limitation of the claims, and Official Notice is erroneously applied to supply the deficiencies, the claims cannot be anticipated by Dickens. Applicants request reconsideration.

Respectfully submitted,

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